

## CHAPTER II

### NORTH KOREA IN TRANSITION

#### 1. The Land Reform

Toward the end of Japanese rule, a wide disparity existed between lands held by peasants, who formed the majority of the rural population, and lands held by landlords. According to a survey conducted by the Japanese in 1942 (quoted in Ko Sung-hyo 1971:2), the landlord households, which composed only 3.3% of rural households, owned 60% of the land under cultivation in Korea, composed of 68.3% of the highly productive irrigated lands and 52.4% of the less productive dry fields. About 80% of rural households either owned no land or held at least part of their land as tenants.

The size of the average landholding in Korea was 1.5 *chongbo* (one *chongbo* equals 2.45 acres) (ibid.:3). In 1938, among households that either lacked land or rented at least part of their land, over 60% held less than one *chongbo*, and well over one-third held less than one-half *chongbo*. The bulk of land under cultivation was held by a relatively small number of Korean and Japanese landlords and a handful of large Japanese corporations. According to 1936 statistics, 2,330 landlords and corporations held over 50 *chongbo* each, of which 67.4% were Korean and 32.2% Japanese. The larger the scale of landholding, the higher was the proportion of Japanese owners. For example, over half (52.8%) of the landlords with over 100 *chongbo* and 78.7% of those with over 200 were Japanese. Twenty-five Japanese landlords held over 1,000 *chongbo* each, whereas only ten Koreans owned that much. A few Japanese corporations played the role of colonial agents in Korea; among these the Toyo Takushoku Company with 50,000 *chongbo*, the Chosen Kogyo Company with 19,000, and the Chosen Shintaku Company with 9,000 had the largest holdings. The total area of land held by Japanese companies and individuals, and by the Japanese government, however, was only 11.3%.

Shortly after the Japanese formally took power in Korea, they conducted under the pretext of confirmation of land ownership a nationwide land survey, which was completed in 1918. Until the end of the Yi Dynasty all land had been nominally owned by the government, and only the right to collect revenue from crops had been recognized, for certain lands. The lands on which this right obtained were held by the Korean aristocracy, bureaucrats, and members of local privileged classes, and the Japanese allowed these people to keep their lands as private property. The land survey was

conducted as a preliminary step before utilizing the remaining land to support the Japanese economy. The land survey and other Japanese colonial policies, however, had little impact on the traditional Korean class system. The colonialists carefully tried to avoid any confrontation with the ruling class in Korea. The former privileged class was thus allowed to retain its wealth, and the majority of the peasant population was left without land and remained as tenants.

The fact that the northern half of Korea alone went under Communist rule does not mean that the peasant life in northern Korea under Japanese domination had been much harder than in the south. In fact, there is some evidence that the peasants in the north may have been somewhat better off: "In the north the dry fields prevail, while the south contains irrigated lands, the yields of which are almost double the yields of dry fields" (Grajdanzev 1945:282). Almost two-thirds of the dry fields of Korea were in the north, whereas 73% of the irrigated lands were in the south. The high productivity in the south had led in all probability to more intensive exploitation of both lands and tenants by the landlords and Japanese colonialists. As compared with owner-households, the proportion of landless households, either tenants or agricultural laborers, was much smaller in the north (46.4%) than in the south (60.4%), whereas the proportion of households owning at least part of the land they cultivated was higher in the north (48.2%) than in the south (38.8%) (*ibid.*). The size of landholdings was much larger in the north. According to Grajdanzev, during 1934-1936 over one-fourth of the households in the south had less than one *chongbo* of land under cultivation, versus 35% in the north. These data contrast sharply with statistics on middle- and large-size farms. Only 1.6% of the farming households in the south held more than 3 *chongbo*, whereas 15.1% of those in the north fell in the same class. Thus economic hardships experienced by peasants before the end of the Japanese rule in 1945 are likely to have been less acute in the north than in the south.

When the northern half of Korea became Communist, over 111,000 *chongbo* of its arable lands were owned by the Japanese government or by Japanese nationals and corporations. For the Communists, one of the most urgent tasks in winning popular support from the vast majority of poor peasants who had lived so long under straitened circumstances was land reform. Many of the landlords with large holdings, Korean as well as Japanese, were absentee owners who lived in the cities, especially the capital city of Seoul in the south, and collected rents through agents. Fearing the Communists, many fled south even before the land reform actually began in North Korea. "After these landowners had gone," according to Washburn (1947:156), "the landless peasants in a number of places seized the discarded fields and divided them among themselves."

On March 5, 1946, the North Korean Interim People's Committee, adopting the proposal of land reform of the Peasants Federation, passed an ordinance on land reform. The major principle underlying the reform was "land to the tillers," entirely abolishing tenancy. According to the ordinance (for English text, see U. N. 1951:59, or *Korea Today*, 1972, No. 189:16-17), the following categories of land were subject to confiscation and were to be given without charge to peasants with little or no land: 1) land possessed by the government, civilians, and organizations of Japan; 2) land owned by national traitors, that is, those who collaborated with the Japanese colonialists; 3) land owned by those who fled after the liberation; 4) land owned by Korean landlords in excess of five *chongbo* per farming household; 5) land owned by absentee landlords; 6) land rented out continuously for many years, regardless of size; and 7) land owned by churches, monasteries, and other religious organizations in excess of five *chongbo*.

Land confiscated and redistributed to the peasants was to be "owned permanently." It should be noted, however, that "permanent ownership" of redistributed land is quite different from "private ownership." The ordinance further stipulated that, after the redistribution, land could not be sold, rented, or mortgaged. The peasants were given certificates of land ownership for their newly acquired lands by the provincial government, that is, the Provincial People's Committee. These certificates did not recognize private ownership of the land, but were designed to guard against further transactions in land.

The land reform ordinance also extended to other major aspects of the rural economy of pre-Communist Korea. All debts owed by peasants to landlords whose lands were subject to confiscation and redistribution as well as liabilities on such lands were annulled; cattle, agricultural implements, and houses formerly owned by these landlords were to be confiscated; orchards and fruit trees possessed by the Japanese and the Korean landlords were also to be confiscated; irrigation facilities owned by those whose lands were subject to confiscation were to be turned over to the state; and all forests, except small areas owned by peasants, were to be confiscated and turned over to the state.

Finally, the land reform ordinance stipulated that, under the guidance of the North Korean Interim People's Committee, the Provincial, County, and District (*Myon*, now abolished) People's Committees assume responsibility for enforcement of the land reform program on the different administrative levels. On the village level, responsibility was to be assumed by the Agrarian Committee, to be elected by a general assembly of agricultural workers, tenants, and independent peasants with little land.

Landlords were not only deprived of their land and all other private property related to agricultural production, they were also entirely eliminated from the executive body enforcing the land reform. If landlords desired to

work land themselves, they could hold the same amount as peasants, but they were given land only "in other counties." This appears to have been an attempt to take away the power formerly held by landlords, and also to avoid any possible conflict between landlords and their former tenants. It is difficult to determine how many landlords lost their lands. Official North Korean statistics list under the category of landlords with more than five *chongbo* per household 29,683 households whose lands were confiscated. The same source, however, lists only 3,911 landlord households that moved into new localities and received land (see tables 1 and 2). These figures lead to a question about the fate of the vast majority of landlords deprived of their lands and other property who received no land at the time of redistribution. No clear data to answer this question are available. In all probability many took refuge in the south or were forced to move into urban areas as non-agricultural workers.

Instructions on the redistribution of confiscated lands provided that the size of allotments be based on the number of household members and their ability to work as determined by their age. Each member of a household to receive land was rated according to age. A rating of 1.0 point was given for men of 18 to 60 years and women of 18 to 50 years; 0.7 point for children of 15 to 17 years; 0.4 point for children of 10 to 14 years; 0.1 point for children under 10 years; and 0.3 point for men over 60 and women over 50. The value of a point was not the same in every locality or village, however, since the ratio of confiscated land to the number of eligible people varied according to locality. After the Agrarian Committee completed the confiscation of land and the tabulation of points for each household, the Committee determined the value of a point by dividing the total area of land available for redistribution by the total number of points per village. Therefore, the size of the allotment of each household was determined by the total number of points of the household multiplied by the value of a point. The productivity of land was taken into account in redistribution insofar as possible. As determined by these procedures, the changes brought by the land reform may be seen in tables 1 and 2.

As the figures in the tables indicate, approximately one-half of the 1,860,000 *chongbo* of arable land in North Korea in 1946 was involved in the reform. Over 60% of the confiscated land came from peasant households with medium-sized holdings that had owned no more than 5 *chongbo* but had rented out part or all of their land. As noted earlier, the proportion of land formerly possessed by Japanese was 11.3%. No comparable data are available for South Korea, but, as has already been suggested, it appears that North Korea was less exposed to exploitation by Japanese colonialists than southern Korea, probably due to its own geographical disadvantages of lower productivity, a lower proportion of irrigated to dry fields, and mountainous terrain.

TABLE 1  
CONFISCATED LAND, 1946\*

Owners of Land	Total Area ( <i>chongbo</i> )	No. of Cases**	Average Area per Case
Japanese government and nationals	111,561	12,919	8.63
National traitors and deserters	12,518	1,366	9.09
Landlords with over 5 <i>chongbo</i>	231,716	29,683	7.80
Those who rent all of their land	259,150	145,688	1.77
Those who continuously rent their land	354,093	228,866	1.54
Churches, monasteries, and other religious groups	14,916	4,124	3.54
TOTALS	983,954	422,646	2.32

\*Orchards are excluded in this table.

\*\*This may be households, corporations, or other social units.

TABLE 2  
REDISTRIBUTION OF CONFISCATED LAND, 1946

Recipients	Area ( <i>chongbo</i> )	No. of Households	Average Allotment
Agricultural laborers	21,960	17,137	1.28
Tenants without land	589,377	442,973	1.33
Peasants with little land	344,134	260,501	1.32
Landlords who relocated	9,598	3,911	2.45
TOTALS	965,069	724,522	1.33
Land reserved by the People's Committee	18,885		
TOTAL	983,954		

Source: *Chosen Minshushugi Jinmin Kyowakoku Kokumin Keizai Hatten Tokeishu, 1946-1960* (Statistical Returns of National Economy of the Democratic People's Republic of Korea, 1946-1960) (Japanese edition by the Central Statistics Bureau, State Planning Commission of the D.P.R.K.), Pyongyang: Foreign Languages Publishing House, 1961:57-58.

It appears that "national traitors" and deserters were the largest category of landholders whose land was confiscated. The majority of those who were classified as national traitors were Koreans who had made large fortunes through collaboration with Japanese colonial authorities. The average size of holdings confiscated from national traitors and deserters was 9.09 *chongbo*.

Nearly one million *chongbo* of confiscated land were redistributed, and less than 2% was placed under state ownership. Each household received an average of 1.33 *chongbo* of arable land. A close look at figures on average allotments by recipient classes (table 2) raises a question concerning the reasons for the marked difference in average allotments to former poor peasants and to landlords. Landlords were given almost twice the amount received by the average agricultural laborer. The official North Korean source of data on the land reform gives no explanation. Two factors may have influenced the amount of the allotments. Since the amount of land was based upon the point system tabulated by the age and sex of each household member, differences in the average size of landlord and peasant households might explain the differences. Since the low income of the agricultural laborers could not support large households, they tended to have relatively small families. In pre-Communist times, it was not uncommon for poor but able-bodied men to leave their homes and families to seek employment as agricultural laborers in other localities. It was quite rare for agricultural laborers to form households larger than the nuclear family. Conversely, the families of the well-to-do tended to be relatively large and to include kin beyond the members of the nuclear family. The quality or productivity of land may also have been influential in determining the size of these allotments of land. The peasants remained in their native villages, but the landlord class had to move to new localities where the soil was of poor quality or was, in many cases, virgin land. Larger allotments of inferior quality to the landlord class seem to have been balanced by the lower average allotments of land of higher quality to the former peasants. Regardless of differences in average allotments according to former socio-economic status, the size of average landholdings was small.

There is no doubt that the land reform substantially changed the social structure of North Korea. The former landless peasants were given land of their own and a strong voice in village affairs, whereas well-to-do families lost virtually all of the political power they had long exercised. Although the land reform brought about the abolition of the traditional class system, which was largely based upon the ownership of private property, it did not achieve a society that was truly egalitarian in economic opportunities, since it allowed differences in the size of landholdings among peasant households in the same village. No ceiling in the size of landholdings was set forth in the reform program at the time. Since confiscation did not apply to land that was



cultivated by its owners, a class of "new rich peasants" began to emerge a few years after the reform. Unlike the former landlords, the former middle-class peasants who owned more than five *chongbo* of arable land but tilled it themselves were allowed to keep their land. The holdings of the former middle-class peasants were much larger than the average allotment of 1.33 *chongbo* per household. Owner-farmers were also allowed to keep necessary means of production such as draft animals, ox carts, and other agricultural instruments. Landholders who now had relatively large plots of land of good quality—so-called *munjon-oktap*, or fertile fields near their houses—undoubtedly held an economic advantage over others.

Although tenancy had been formally abolished by the land reform, there was still room for exploitation of poor peasants by the "new rich peasants." The owners of large holdings managed their farming through lending draft animals and agricultural instruments to poor peasants in exchange for labor, which had been common practice in pre-Communist years. In this way, it was still possible to operate large holdings without violating the ordinance prohibiting tenancy, but, since land was no longer subject to sale or purchase, no expansion of holdings was possible. Some well-to-do families practiced usury, lending grain to poor peasants who were out of food well before the next harvest, under agreements that the latter return the same amount of grain plus substantial interest after harvest (Kajimura 1966a:305-306). An official North Korean statement tells us:

The land reform dealt a severe blow to rich peasants, but they still remained as a class. Accordingly, exploitation in various forms was to be seen in the countryside, and new rich peasants emerged, although small in number. Some peasants who became rich after the land reform would practice usury, hire workers instead of doing their jobs themselves, and indulge in the worst type of profit seeking (*Agricultural Cooperativization in D.P.R.K.*, 1958:16; also quoted in Lee 1962:13).

The activities of large landholders were somewhat restricted in late 1948. The North Korean Constitution, adopted and promulgated in September 1948, provided that size of landholdings could not exceed five *chongbo* in the plains or twenty *chongbo* in mountainous regions (Article 6). A program of reexamination of landholdings then took place in rural North Korea and, in accordance with the new regulations, certificates of land ownership were withdrawn and reissued.

For most peasants, the initial land reform ordinance was not surprising at all. It was what they had expected after the Communist take-over. The mobilizing force was the Peasants Federation (*Nongmin Tongmaeng*), newly organized among the poor peasants toward the end of 1945. In order to carry out the land reform with the least possible disturbance and resistance, trained cadres were dispatched from the central government into each village. Although the reform had been executed in the name of peasants, these cadres supervised and directed the entire procedure. Confiscating the

properties possessed by the Japanese presented no problem, but the land reform ordinance was met by strong resistance from the landlords and wealthy families. In order to minimize and weaken potential resistance, the regime encouraged each village to ostracize rich landlords. "Some landlords, who were besieged by excited peasants, deserted their native villages, and some opened their stores of grain to the peasants and begged the latter's pardon" (Hwang et al. 1960:205). For example, three landlords in the Korea-China Friendship Agricultural Cooperative in Sangyang hamlet, whose confiscated lands each exceeded five *chongbo* and who were suspected of possible "reactionary influence," were ostracized and forced into relocating (ibid.:206).

The entire land reform of 1946 was reportedly completed throughout rural North Korea in only about twenty days. As a result, the geographic and social movement of the North Korean population apparently reached its peak during and shortly after this time. There was no reason for the poor peasants to leave their native villages since they had moved up to the status of a somewhat privileged class, economically and politically. But fear of the possible acts of the local Communist authorities and the former lower class had led thousands of wealthy families to desert their homes. No doubt the majority of them fled to South Korea. The United Nations Temporary Commission on Korea estimated that 1,116,600 North Korean nationals had taken refuge in South Korea by the end of 1947 (U.N. 1948:I-23). Another report (Choson Unhaeng Chosa-bu 1948:I-9), gives the estimated number of refugees in South Korea during the same period as 803,434. Among these, 185,441 were reported to have left North Korea in 1946, and 165,074 in 1947.

TABLE 3  
ESTIMATED NUMBER OF REFUGEES BY MONTH, 1946

January . . . . .	13,306	July . . . . .	8,212
February . . . . .	20,437	August . . . . .	4,739
March . . . . .	34,670	September . . . . .	2,234
April . . . . .	50,450	October . . . . .	2,997
May . . . . .	25,818	November . . . . .	4,740
June . . . . .	17,203	December . . . . .	635
Total . . . . .		185,441	

Source: Adapted from *Choson kyongje nyonbo*, by Choson Unhaeng Chosa-bu (ed.), Seoul: Choson Unhaeng 1948:I-9.



From these reports it seems clear that the majority of refugees had already deserted their homes in North Korea and fled into the south well before the actual land reform started. The statistics of table 3 help demonstrate the impact of the land reform ordinance on the flow of North Koreans to the south. As this table shows, the number of refugees greatly increased during the month of the land reform. The following month of April 1946 saw the greatest flow of refugees during a single month. From March through May, over 100,000 North Koreans took refuge in the south.

## 2. Cooperativization

Although the former landlord class had been largely removed from the scene by the land reform and the lot of poor peasants had improved, as we have earlier noted, North Korea was not yet an egalitarian society because the former middle class had gained economic strength. The land confiscated and redistributed in accord with the land reform ordinance was neither nationalized nor put into private ownership. To some extent, it can be said that the peasants' newly-acquired land was under *de jure* private ownership but *de facto* state ownership. The land reform had only cleared the way for further consolidation of rural economic organization; that is, the reform was the first step toward the "agricultural cooperativization" that was to follow. Since land could not be sold, the regime was in no hurry to conduct further reorganization of the rural economy and focused its attention next on increasing production. The North Korean Constitution (Article 9), promulgated in 1948, provided that the cooperative management of rural economy be introduced and encouraged, but this did not materialize until after the Korean War (1950-1953).

A decree of December 1949 provided for the formation of state farms. Absorbing the land reserved as state property during the initial land reform, the newly established state farms, provincial and central-governmental, were designed to demonstrate the "superiority" of collective management of rural economy. They served as forerunners for future cooperativization and experimentation with various other aspects of rural economy. During the Korean War, rural North Korea suffered a severe shortage of labor. All able-bodied men were mobilized for military service, leaving principally old men, women, and children in the villages. To meet the labor shortage, the government encouraged the peasants to organize a number of mutual aid groups. These were called *chonson kongdong chagoptae* (front joint work teams), *pumasi-ban* (mutual aid groups), *sogyoli-ban* (ox sharing teams), and *puop hyopdong chohap* (side-line or subsidiary cooperatives). The "front joint work teams" reportedly prevailed near the war front, especially in Kangwon Province, the eastern front. The members of these teams, which cultivated land cooperatively and also actively assisted at the war front, were principally young people whose families had been evacuated to places of

safety. Sizes of teams ranged from fifty to two hundred persons (Kim Han-ju 1958:14).

The *pumasi-ban*, or mutual aid group, had long been common in traditional rural Korea. As a temporary work organization among neighboring villagers, it was active during the peak seasons of agricultural work, including seeding, rice transplanting, weeding, and harvesting. The "ox sharing teams" were planned to meet a shortage of draft animals. Subsidiary cooperatives not directly connected with agriculture were especially common in the coastal and mountain regions. Member households of these associations carried out their own farming on an individual basis, but jointly conducted projects such as livestock raising and handicrafts as subsidiary activities. These subsidiary cooperatives numbered seventy-one when the Korean War ended in July 1953. The total number of cooperatives, including agricultural and subsidiary, in rural North Korea in July 1953, reportedly reached 174, composed of 2,354 households (*Nongop hyop-donghwa undong ui sungli*, 1958, I:4, and Kajimura 1966a:300). These organizations may be seen as incipient forms of the agricultural cooperatives that were later developed.

The Korean War dealt a serious blow to the North Korean economy, both rural and urban. Property was damaged and a shortage of agricultural labor developed. Urban centers needed much manpower for post-war reconstruction and industrialization. War casualties and the southward flow of refugees reduced the North Korean population. When the war front moved to the northernmost part of Korea, many people in all parts of the country who opposed the Communist regime chose to leave North Korea for the south. The Korean War aided the Communist regime, however, by helping to foster among its subjects a revolutionary ideology and by eliminating the so-called reactionary elements.

In August 1953, one month after the truce, the Communist regime called for a major reorganization of rural economy, the cooperativization of agriculture. During the following year, which was labeled by the Communists as an "experimental stage," an intensive propaganda campaign for cooperativization was conducted throughout North Korea. First, each county (*kun*) was ordered to set up two or three cooperatives among the poor peasants who were regarded by the Communists as loyal supporters well indoctrinated with Communist ideology. Establishment of these early cooperatives aimed to demonstrate the superiority of cooperative management of agriculture and to educate peasants in the operation of cooperatives. By the end of 1953, 1.2% of the peasant households in North Korea had been organized into 806 cooperatives. After this experimental stage, near the end of 1954 the regime launched a full-scale movement toward cooperativization. An existing trend toward giving preferential treatment to the cooperatives over individual farmers was intensified during

this period. The government gave every possible form of assistance to the cooperatives, including preferential treatment by governmental "stations" which rented farm machinery, a reduction of taxes-in-kind, loans of grain to poor peasants, a supply of urban workers during peak periods in the agricultural cycle, and priority over individual farmers in access to seeds of high quality produced in state-owned seed farms.

With this strong support the number of cooperatives increased greatly after 1954. At the end of 1954, 31.8% of the peasant households were in cooperatives; in December 1955 the number had risen to 49.0%; in December 1956, to 80.9%; and at the end of 1957, over 95% of the peasant households no longer operated individual farms. By August 1958 the entire rural population of North Korea was under the cooperative management system. There were then 13,309 cooperatives, with an average of 79 households and 134 *chongbo* of arable land each (*Choson chungang nyon'gam* 1959:193 and 330).

Proclaiming "victory of cooperativization," the regime further consolidated rural economic organization by reducing the number of cooperatives and consolidating them into larger units during the fall of the same year. By this measure, 13,309 cooperatives had been reorganized into 3,843, each of which had an average of 275 households and 456 *chongbo* of arable land. In pre-Communist times the *li* or hamlet was the smallest administrative unit of the nation. Under Communism the *li* was enlarged to include several neighboring hamlets and the "new" *li* coincided with the cooperative farms.

The merging in North Korea of agricultural cooperatives and the *li* occurred at the time of the completion of the reorganization of rural Communist China into People's Communes, and for this reason one might conclude that the Chinese development was "promptly echoed by North Koreans" (Lee 1963:76). North Koreans were well aware of what was happening in Communist China, and they did learn much from this source about the collectivization of rural economy. Information about the "Great Leap Forward" and the commune movement in Communist China was widely dispersed through national propaganda channels. One of North Korea's scholars acknowledges that information about collectivization movements experienced by Soviet Russia, Communist China, and other Communist countries was utilized in the cooperativization movement in North Korea (Kim Han-ju 1958:73). We find it difficult, however, to accept the notion that North Korea's establishment of cooperatives was an echo of the commune movement of Communist China. Statistical evidence (Central Bureau of Statistics 1961:62-63) shows that the size of cooperatives in Korea had been consistently growing since the movement began, and a number of cooperatives had already grown beyond the size of the old *li* before the official merger of small cooperatives. The number of cooperatives with 101 to

200 peasant households each was 222 in 1954; 354 in 1955; 1,247 in 1956; 2,064 in 1957; and 1,074 in 1958. Twenty cooperatives with 201 to 300 households each existed in 1955; 103 in 1956; 137 in 1957; and 984 in 1958. Furthermore, cooperatives with 301 to 400 households numbered 34 in 1957, a year before the official merger of small cooperatives. Some of these had been organized as large cooperatives from the beginning, whereas others were later created by merging. From this evidence, it seems clear that the tendency toward forming large cooperatives had already begun in North Korea before Communist China launched its campaign of merging cooperatives into people's communes.

At the outset of the cooperativization movement, the North Korean regime had proposed three types of cooperative management of agriculture, identified as Type I, Type II, and Type III in North Korean documents. In fact, these are three stages of the evolutionary transformation from individual farming into cooperative management. The three types may be called mutual aid teams, semi-socialist cooperatives, and socialist cooperatives, and are characterized as follows:

*Mutual aid teams (Type I):* Each household maintains absolute control over its private property including land, draft animals, and agricultural implements. Members of the team pool labor and use draft animals and agricultural implements communally, while retaining individual management of private property. The amount of the contribution by member households is balanced by varied compensation to them in the form of produce and/or labor. Mutual aid teams are organized on a year-round basis.

*Semi-socialist cooperatives (Type II):* Member households still retain ownership of their land, but all the land possessed by member households except a few fruit trees and small garden plots is pooled and collectively managed. Draft animals and agricultural implements may be purchased by the cooperatives with communal funds. Distribution of crops depends on both labor and land contributed. When the crops are harvested, some of the produce is set aside for payment of taxes-in-kind, production costs including the cost of fertilizer and seeds, machinery rental, irrigation facilities, and as funds to be held as common reserves for emergencies and for socio-cultural purposes, such as recreation and education. The remainder is then divided among the member households, 80% or more being allocated on the basis of the labor contributed, and 20% or less allocated on the basis of the investment of land. If an owner of land contributes less than 120 work days in a year, his right to receive dividends for the investment of land is nullified. Income from the joint subsidiary projects is divided solely according to the amount of labor contributed.

*Socialist cooperatives (Type III):* Except for fruit trees, private garden plots, livestock (non-draft animals), and bees, all property in land, draft animals and major agricultural implements is turned over to cooperative ownership, and all farm work and subsidiary production is done collectively. Private ownership of land is legally preserved, but it has no bearing on utilization of land and distribution of income, since member households are paid solely on the basis of labor contributed, after deductions for production costs, taxes-in-kind, common reserves, and funds for socio-cultural purposes. (Kim Han-ju 1958: 29-31, and Ko Sung-hyo 1971: 49-51)

These three types of cooperative mechanisms appear to have been consciously designed as evolutionary stages of rural social organization. The regime recommended that the peasants choose a type which would fit their local circumstances and regarded the third type as the "most advanced stage," toward which all people should eventually strive. The principle of voluntarism advocated by Lenin decades ago was said to have been strictly observed in accordance with the ordinance; a campaign promoting increased cooperativization was conducted, however. During the early stage, agricultural cooperatives were largely initiated by devoted party members and poor peasants, leaving the wealthier peasants as individual farmers. Evidence strongly suggests that there were clear differences in the people's attitudes toward cooperativization according to their socio-economic statuses (Hwang et al. 1960:216). Those who were in the lower economic strata after the land reform enthusiastically supported the formation of agricultural cooperatives from the beginning. These were largely poor farmers who had received some land during the land reform but whose income remained far below their needs and who had little to lose by joining cooperatives. Many of the "new middle class" farmers also supported cooperativization. These consisted of formerly poor people who had become relatively self-sufficient after the land reform. Since their present economic condition was almost entirely made possible by the policies of the Communist regime, their favorable reaction is understandable. Enthusiasm for cooperativization was also shown by the families who had lost members in the war and families that included war heroes. The new middle class farmers, who had survived the land reform with a goodly amount of their land and who maintained living standards above those of the average family, generally hesitated and remained spectators. The most prosperous farmers strongly opposed cooperativization, since it would mean financial loss.

The formation of "mutual aid teams" was easily accomplished, since they do not interfere with individual farming, and Korean peasants were, in fact, well-accustomed to such organizations in their traditional mutual aid associations. Although the regime suggested three stages of cooperativization, little attention was paid to the formation of "mutual aid teams" during the active campaign toward cooperativization. This is evidenced by the fact that official North Korean statistics on the progress of cooperativization deal with only the second and third types, that is, semi-socialist and socialist. Three evolutionary stages of transformation were, it seems, not observed in the majority of cases. In many cases, peasants were directly organized from the beginning into the most "advanced" type.

Documentary material concerning the actual process of cooperativization is abundant. The Central Committee of the North Korean Workers' Party compiled data on the experiences of cooperativization and the operation of cooperatives in six volumes entitled *Nongop hyopdonghwa*



*undong ui sungli* (Victory of the agricultural cooperativization movement), published in 1958 and 1959. These compilations contain about ninety case studies of individual cooperatives. The first volume deals particularly with the developmental process, describing twelve cooperatives. From this volume, I have chosen one case study to illustrate the process of transformation, the Korea-China Friendship Agricultural Cooperative (Volume I:153-186). This particular case study was chosen chiefly because the account is amplified by another work (Hwang et al. 1960), an ethnographic study of the same cooperative. Using these two sources, I give in the following pages a summary of the process, describing how the cooperative came into being, and how individual peasants were brought into the cooperative.

Korea-China Friendship Agricultural Cooperative (*Cho-Chung Ch'inson Nongop Hyopdongchohap*) is located in Taek'am-li of Sunan County in South P'yongan Province, a plains region north of P'yongyang. The cooperative originated in a small hamlet called Sangyang, and was known as Sangyang Agricultural Cooperative until late 1959. At the time of liberation from Japanese rule in 1945, there were 105 peasant households in Sangyang hamlet, including seven large landlords and seven middle peasant households. The majority of the village people lived by tenant farming. The land reform at once brought about some changes in the village social structure. Three of the large landlords were ostracized and moved to other communities (Hwang et al. 1960:206), but some of the wealthy families survived the land reform, having only their rented lands confiscated. Although agricultural laborers and tenants had received some land during the land reform, the majority of the people remained poor. At the time of the truce in 1953, there were 103 households in the hamlet, among which fewer than ten were self-sufficient and about forty lived on grain loans from the government.

At the height of the movement toward cooperativization after the truce, the *Li* Party Committee, composed of devoted party members, organized a propaganda campaign. Committee members focused their attention on the poor, visiting them to explain party policy and the need for cooperatives, and extolling the superiority of cooperative management of agriculture. The campaign brought new hope for the poor people, but made the wealthy ones uneasy. As expected, the wealthy families opposed cooperativization. Since they were still running their large landholdings by seasonally employing poor villagers, the formation of cooperatives even among the poor would deal a serious blow to them, making it impossible to hire laborers and to rent out draft animals and agricultural implements. The self-sufficient middle farmers also opposed cooperativization because membership in a cooperative on an egalitarian basis with poor families would mean a heavy financial loss.

Toward the end of 1953, when some signs of willingness to form cooperatives were seen, the *Li* Party leadership took the initiative, and with



first ten willing households and two immigrant households, set up Sangyang Agricultural Cooperative, the first cooperative of the socialist type to be established in South P'yongan Province. All of its members were poor. The County People's Committee immediately took every possible measure to support the cooperative. In order to boost the members' morale, grain, seeds, and needed funds were provided. The cooperative purchased an ox and agricultural implements with a loan from the Farmers' Bank. The unit of the Chinese People's Volunteer Army which was then stationed near the hamlet also supported the cooperative by delivering 200 tons of horse manure directly to the fields in army vehicles. With this substantial support, the cooperative had a successful harvest at the end of its first year, producing an average of 2.4 tons of rice per *chongbo* of paddy fields against an average of about two tons for the individual farms. The cooperative also produced an average of one ton of barley, wheat, and potatoes per *chongbo* of dry fields versus about 700 kilograms for the individual farms. The propaganda networks picked up these figures as an important aid in advertising the "superiority of cooperative management of agriculture." Peasant households still engaging in individual farming carefully watched the operation of the cooperative throughout the year. At year's end, many of them, mostly poor but a few middle-income, expressed willingness to join the cooperative. By now the tendency to favor cooperativization had become a serious threat to the wealthy farmers.

Realizing that there would no longer be a supply of labor if all the poor farmers joined the cooperatives, the affluent and some of the middle farmers sought a way to survive. They attempted to organize their own cooperative of the second or semi-socialist type by recruiting poor families with many able-bodied members as a labor force that would allow them to continue conducting their farms under private ownership. About ten wealthy and middle farmers initiated this attempt to establish a new cooperative, promising loans of grain and cash to poor farmers if they joined. Signatures indicating willingness were given by about twenty poor farmers, and verbal promises to join were given by many others who were not members of the existing socialist cooperative. During this quiet campaign of recruitment, the recruiters concealed the fact that the cooperative was to be semi-socialist rather than socialist. In mid-December 1954, the organizers called a meeting to form the cooperative. About sixty people attended, during which they inquired as to the type of cooperative planned. As the discussion grew heated, it became clear that the organizers intended to take advantage of the poor farmers, since a semi-socialist cooperative takes into account in its distribution of earnings the amount of land invested by members. The majority of the people attending the meeting left before it ended and called at the office of the year-old Sangyang Agricultural Cooperative, expressing their willingness to join it. On the same day, the Sangyang Cooperative called a

members' assembly and accepted seventy-eight households as new members. The cooperative leaders also continued their attempts to persuade the rich and middle farmers to join, and after about two months of continuous effort, Sangyang Cooperative had grown to a hundred member households. Although rich and middle farmers had joined, they were unhappy about their new status and continuously engaged in minor conspiracies to obstruct operations.

During 1955, more outside support was poured into the cooperative. At the time of rice transplanting, the county authority sent a labor-assistance team of thirty-two office workers and students. Later the central Party dispatched to the cooperative on a mission of "concentrated guidance" a group of twenty cadre members, who stayed in the village fifteen days giving instruction in the cooperative management of agriculture. After the year's harvest, which reportedly brought the member households more than twice their earlier incomes, the remaining hold-outs, three households of old residents and eight of those households moved into the village from other parts of the country under the Communist rule, also joined the cooperative. Sangyang hamlet was then completely cooperativized with 111 member households and 239 working members.

One year later, in the fall of 1956, the Sangyang Agricultural Cooperative merged with four neighboring cooperatives: Pubaek (established in the fall of 1954), Taek'am (late 1954), Ponghwajae (fall of 1955), and Taegol (early 1956). Since all of these cooperatives were already full socialist types, the merger was easily carried out. The unit of the cooperative had now become identical with the administrative district or *li*. During the following two years, the cooperative expanded further, absorbing neighboring small-scale cooperatives; Sansong and Namch'ang of Ochung-li in late 1957, and Sachik-li Che-il, Sachik-li Che-i, and Yonsan Cooperatives in the summer of 1958. Over 460 households and 800 or more working members were brought into a single cooperative. In the fall of 1959, Sangyang Cooperative changed its name to "Korea-China Friendship Agricultural Cooperative," which was apparently named to honor the assistance given by the Chinese People's Volunteer Army during its early stage of cooperativization and Chinese Premier Chou En-lai's visit to the farm in February 1958.

It should be noted that from its beginning this cooperative was heavily indebted for aid to the local and central governments. During the peaks of the agricultural cycle each year, labor forces in the county, including office workers, students, and military men and their families, were mobilized to assist the cooperative. The central government also introduced farm machinery, and its agricultural machine station carried out most of the heavy work formerly done by draft animals and human labor, such as plowing and transporting. Following its usual policy, during the early stage of cooperativization the regime lent grain for food, seeds for planting, and

funds; reduced taxes-in-kind; and exempted the cooperative from repaying its grain loan. All of these measures undoubtedly helped inspire the members with zeal to increase production.

As we have seen from the foregoing case study, the Korea-China Friendship Cooperative did not go through the second stage of cooperativization, the semi-socialist, but changed directly from the stage of mutual aid team to that of socialist cooperative, even though only a small portion of the village households were involved at the outset. As noted earlier, this course of development appears to be fairly common for other cooperatives. According to official North Korean statistics (*Agricultural Cooperativization in D.P.R.K.* 1958:29, 64), the third type (socialist) was most common. As early as June 1954 there were 1,091 cooperatives in North Korea, of which 54% were already of the third type. In December of that year the socialist type composed 78.5% of the 10,098 cooperatives in North Korea. After two years of active campaigning, cooperativization had succeeded in bringing over 80% of the peasant population into cooperatives, 97.5% of which were of the socialist type by December 1956. Although cooperativization was formally completed by the fall of 1958, the last two years were apparently spent strengthening the organization of the cooperatives and picking up remaining stubborn farmers, principally more or less wealthy households.

The problem of voluntary participation was solved largely by removing all possible conditions under which individual farming was possible, so that the farmers finally gave up their independence and joined. For the wealthy peasants, "voluntarism" consisted, in fact, of "surrendering" their farms. No doubt they resisted losing their property, but as cooperativization progressed, they had no alternative. Large numbers of laborers were required to run their large landholdings, and such labor could no longer be obtained. They could no longer practice usury in loans of grain or cash in order to expand their wealth or to gain labor. As the formerly poor peasants in the new cooperatives improved their financial position, they obtained their own agricultural implements and draft animals instead of using those of the rich landowners.

One important technique used to influence farmers was to show them the "superiority" of cooperative management. In most cases, cooperatives were initiated by a small number of poor farmers. In the early stage, the members of cooperatives were undoubtedly poor as compared with the remaining independent farmers. Viewing the success of initial cooperatives as a building block to successful cooperativization, however, the regime gave them strong support. This procedure apparently worked well on the village level, and more and more families gave up their individual farms as the years passed.

The rapid development of cooperatives in North Korea may also be partially attributed to the fact that, through the land reform in 1946, the

majority of land was not in fact at the owners' disposal. As we have already seen, the farmers were not allowed to sell, buy, or rent their newly-acquired land, even if they were issued ownership certificates. This circumstance certainly must have weakened their attitude toward private ownership of lands. As we have also noted, the land reform was a first step toward the agricultural cooperativization which followed. By giving them free land, the land reform helped to gain the support of the poor, who formed the majority of the rural population, and the regime relied primarily upon these poor people during the initial stage of cooperativization. It is difficult to find record of any cooperatives that have been successfully initiated by the rich and middle-class peasants. We have seen an example in the case of the Korea-China Friendship Agricultural Cooperative of an unsuccessful attempt by prosperous farmers to form their own semi-socialist cooperative. This case illustrates the wealthy farmers' attitude toward cooperativization. A similar example is reported from Sangp'yong-li of Chasong County in Chagang Province (*Nongop hyopdonghwa undong ui sungli* 1958, Vol. I:290).

By the end of 1958, all of rural North Korea had been brought under the socialist economy. Since the early small cooperatives were generally units composed of families that might or might not be close neighbors, they had to cultivate widely scattered lands, an inefficient procedure. Now the ridges between small fields, which formerly served as footpaths and boundaries of individually-owned lands, were removed. Each cooperative considerably reduced the number of distinct units of arable land through readjustment of the fields in this way so that farm machinery could be used more effectively. The Red Star Agricultural Cooperative (*Pulgun-pyol Nongop Hyopdong Chohap*) (ibid.:217-250) may serve as an example to illustrate the point. During the early stage of cooperativization, two small cooperatives of socialist type were formed in a small hamlet called Haboshi. Although cooperative members lived in the same village, they were divided into two cooperatives when they worked in the fields. Disputes often arose over priority in the use of irrigation facilities which the two shared. In at least two cases, disputes involved men who were cousins. Members of both cooperatives discovered that some work could be done with less manpower by merging, and they eventually realized that relatives and neighbors were being estranged by the competition of the two cooperatives. In the fall of 1955 the two merged, adopting the name Red Star Agricultural Cooperative.

After the general amalgamation, the cooperatives of North Korea became giant corporations, which handled all aspects of rural economy including distribution and exchange. Now the enlarged financial scale made it possible for cooperatives to purchase modern machinery, such as tractors and combines, for use in larger fields. Increased efficiency in the use of available labor and means of production improved the material benefits of

the member households. Utilizing labor pools, cooperatives undertook large-scale irrigation projects and other construction projects, which further boosted production.

Until cooperativization was completed, the farmer was told to retain his land in private ownership so that he could be compensated for land invested in the cooperatives if he should wish to leave the village. Even this nominal right of private ownership was taken away, however, and all land was placed under "cooperative ownership" of the members.

Since the amalgamation to form large units, little has changed in the organization of the cooperatives, although some measures have been taken to run them more efficiently. The official name of the cooperatives was changed, however. In early 1962 (January), the title *Nongop Hyopdong Chohap* (Agricultural Cooperative) became *Hyopdong Nongjang* (Cooperative Farm).

### 3. The Cooperative Farm

As the preceding pages suggest, the changes in agriculture under Communist rule brought many other changes in rural life. The development of the cooperative farms may therefore be regarded as an important stage in a long process of transformation creating a Communist society. In theory, the land is under cooperative ownership. Members of the cooperative farms, who form the majority of the rural population, are neither independent farmers, like the traditional peasants, nor wage laborers, like the farmers of the state farms. Their income depends principally upon the joint results of the work in which they have participated. The effects of the establishment of the cooperatives on rural North Korean life may be inferred by examining in greater detail their structure and modes of operation. I shall first give attention to the manner in which the farms are organized.

The average cooperative farm consists of about 300 farm households composed of 1,500 people and has 500 *chongbo* of arable land. As I have noted, the cooperatives correspond with the modern *li* or hamlet, a unit which has expanded under Communist rule to include several neighboring hamlets. As an administrative unit the old *li* played no important role in the social life of the villagers. Only the single hamlet, as a residential community, had been important in daily life. Unless there were some common concerns such as sharing irrigation facilities and neighboring fields, little contact existed with the people of neighboring hamlets. It was common for each hamlet to have its own tutelary god, and face-to-face relations with other people were ordinarily limited to the members of one's hamlet of residence. The merging of several neighboring hamlets into the modern *li* was more than an expansion of the administrative unit. This development strongly affected the traditional structure of the rural community. Far beyond the traditional functional boundary of a hamlet, which was a residential cluster,



the modern *li*, or cooperative farm, is multifunctional. It controls and organizes agriculture and commerce, and also educational, social, political, recreational, and welfare activities. The geographically distinct hamlet may still exist in some places, but it is no longer an independent entity of social life.

In each *li*, administrative affairs are carried out by a People's Committee, and all the other activities are handled by a Cooperative Farm Management Committee, which functions primarily to control agriculture. The highest legislative organ or decision-making body of a cooperative farm is the Plenary Session, which is attended by all active working members. A Delegates' Conference may substitute for the Plenary Session, where or when it is difficult to call the Plenary Session because of the distances between residential clusters within a farm. In this case, the delegates are elected from all segments of a farm. This legislative body is responsible for formulating rules governing the operation of a farm and also determines various farm policies. Matters handled by the Plenary Session or the Delegates' Conference include legislation concerning farm operations; work plans relating to production, construction, distribution, exchange, credit, education, cultural affairs, and health; an annual settlement of accounts and distribution of income; decisions on the size of common financial reserves and welfare funds, and the screening of persons to receive welfare funds; the organization of work teams and the determination of production targets by the teams; supervision of the farm's contracts with outside institutions such as the agricultural machine station; the conduct of hearings that concern the work of the Cooperative Farm Management Committee and the Auditing Committee and the election of members of these two committees; supervision of the composition of farm cadres appointed by the Management Committee; control over admission to membership, and the withdrawal, punishment, and expulsion of members; and the conduct of hearings of reports of the Management Committee concerning farm property and financial matters.

The Cooperative Farm Management Committee is an executive organ of the farm concerned primarily with production. The committee is composed of fifteen to twenty members, headed by one chairman and one or two vice-chairmen. The chairman also holds the chairmanship of the *Li* People's Committee, which concerns itself only with administrative affairs. The Management Committee carries out resolutions adopted by the Plenary Session or the Delegates' Conference and manages various farming activities. It calls the Plenary Session or the Delegates' Conference and appoints and dismisses executive cadres. The committee chairman calls at least two sessions of the committee each month to discuss the management of farm affairs, and he represents the farm in outside relations.

Supervising the operation of the Management Committee is the Auditing Committee, composed of five to fifteen elected members with a



term of membership of one or two years. The Auditing Committee oversees all activities of the Management Committee including the management of farm property, accounting, readjustment of labor credits (*noryogil* or work-days) in relation to the production target, the management of shops, and credit. It also receives and transmits to appropriate channels farmers' complaints concerning the work of the Management Committee. The Auditing Committee reports on its activities at least once every three months and prepares a report of the examination of the annual settlement of accounts for the Plenary Session or the Delegates' Conference.

Each cooperative farm has operational staffs that specialize in various aspects of farm affairs. A chief technician is in charge of all aspects of agricultural technology. Usually a graduate of an agricultural college, he is primarily responsible for the introduction of advanced technology. Under the leadership of the chief technician are production guidance workers, agricultural specialists of various kinds, and a specialist in animal husbandry. Each farm usually has two production guidance workers who engage principally in administrative work. The agricultural specialists are concerned solely with technical guidance. Each agricultural production work team includes at least one agricultural specialist, who usually holds a certificate attesting to his proficiency that is issued by the state upon completion of a short training program in agricultural technology. Other staff members of a farm include a planner-statistician, two to five bookkeepers, one or two labor-statisticians, and one or two warehouse custodians. Each farm runs various facilities and institutions including a credit office, one or more dispensaries, a workers' school, a Democratic Propaganda Room, nurseries, kindergartens, and a club house. Also included are bath houses, which are set up in each residential cluster or for each work team. In some instances, a farm has its own cemetery.

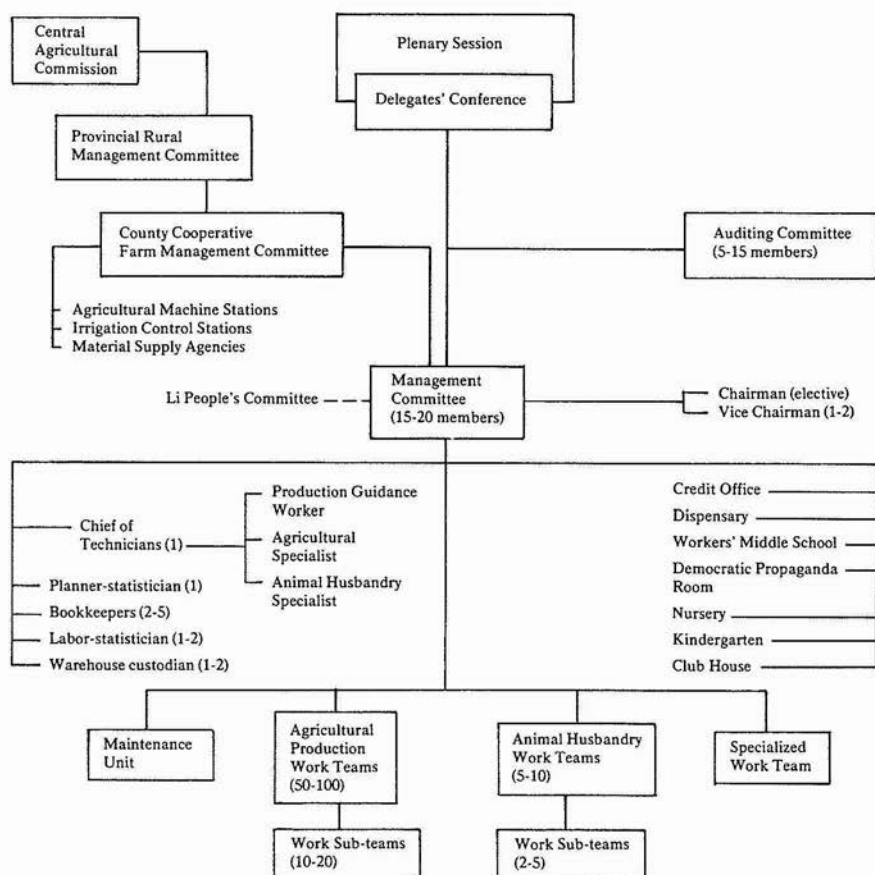
The working members of a farm are organized into "work teams" (*chagoppan*). In general, each cooperative farm has several "agricultural production work teams" (*nongsan chagoppan*) and at least one animal husbandry work team" (*ch'uksan chagoppan*). The former includes fifty to a hundred members in each team, the latter five to ten members. Besides these two kinds of work teams, a farm may have other teams specializing in such matters as the raising of fruit and vegetables and sericulture. Each agricultural production work team is divided into about five small groups called "work sub-teams" (*punjo*), each of which generally has ten to twenty members. Sub-teams of the animal husbandry work teams have only two to five members. Work teams may be further divided into specialities, such as dry-field sub-teams, paddy-field sub-teams, and pig-raising or rabbit-raising sub-teams.

The work teams and sub-teams are year-round organizations to which land, labor forces, livestock, agricultural implements, and draft animals are

assigned. Seasonal work organizations called *chagopcho*, or "work groups" are also used. These groups are organized whenever it is necessary to divide the sub-teams still further in order to utilize them effectively for specialized tasks. The *chagopcho* of five to seven members is organized among members of the larger *punjo* and includes at least one experienced farmer. For example, the *chagopcho* functions from January to early March in the making of bags and rope of straw and the construction of curtains around the seedbeds to protect them from cold temperatures. From mid-June to mid-October, various tasks that include weeding and harvesting are done by sub-units of the *chagopcho*, each of which takes charge of specified areas of fields. Some agricultural work, such as transplanting and threshing rice, requires the cooperation or pooling of all available labor, and these tasks are carried out by all workers, who are divided into sub-teams. In addition to promoting the effective use of labor, the *chagopcho* has proved to be advantageous in letting the farmers bear the responsibility for the results of their work, thus stimulating them to improve the quality of their efforts. A chart (figure 1) graphically summarizes the organization of a cooperative farm into formal units and shows its lines of administrative control.

In further illustration of the organization of the agricultural cooperative, we shall take as an example the Namgu Cooperative Farm in Yomju County (*Rodong Sinmun*, 1/26/66). This cooperative farm has nine work teams, including six agricultural work teams (*nongsan chagoppan*), one animal husbandry work team (*ch'uksan chagoppan*), one fruit-culture work team (*kwasu chagoppan*), and one sericulture work team (*yangjam chagoppan*). Each of the teams is divided into sub-teams (*punjo*), and the sub-teams may or may not be further subdivided. On this farm, where the paddy fields compose 80% of the arable land and the dry fields only 20%, each agricultural production work team is organized with several sub-teams of twenty to twenty-five members in charge of paddy fields and at least one sub-team specializing in dry fields. Each sub-team is in charge of the entire process of production on the lands assigned to it. One of the most difficult problems of the farm management committee is the allocation of land to sub-teams. Such factors as the fertility of soil in each parcel of land, the distance from residential areas, work conditions, and the average yields during the past five years are taken into account. In order to maintain a balance between quality and quantity for all teams, good and poor parcels of land are judiciously allocated. Other necessities, such as draft animals and agricultural implements, are also equitably divided among the sub-teams. The draft animals are classified into four qualitative grades and those of high grade are given to the sub-teams in charge of unfavorable pieces of land.

The animal husbandry work team is assigned lands for producing fodder for its animals. The size and organization of its sub-teams are based on the number of animals and the conditions of fodder production. The fruit-



Source: *Pukhan Ch'onggam: 1945-1968*, pp. 316-317 and 341-342. Also reviewed and modified by my informants.

FIGURE 1: COOPERATIVE FARM ORGANIZATION.

culture work team is divided into three sub-teams, each of which includes sixteen to twenty-three members and is in charge of specified orchards. In composing each sub-team, the number of fruit trees and their condition, including their age, are taken into account. The sericulture work team consists of three sub-teams, each of which includes seventeen members. Each member of a sub-team is in charge of a certain number of silkworms, the number of which, in turn, depends upon the condition of, and the distances to, the fields of mulberry trees, which provide food for the silkworms.

In general, the allocation of labor to work sub-teams is based primarily upon the members' ability to work. More than 85% of the farm laborers and over 90% of the total number of able-bodied members are in the agricultural production work teams. In other words, the majority of able-bodied men and women produce rice and other cereals, whose culture requires relatively hard effort (especially paddy field rice). Except for a few able-bodied male core members, the sub-teams for dry fields and the specialized work teams for fruit-culture and sericulture are composed mainly of females and the aged of both sexes. The allocation of labor is based upon actual experience and is fairly elaborate. For example, on the basis of the statistical knowledge that paddy fields require annually 400 workdays per *chongbo* and dry fields 244 workdays per *chongbo*, the farm authorities have figured that an average sub-team member is able to cultivate 0.8 *chongbo* of paddy field or 1.2 *chongbo* of dry field. Taking this figure into account, the allocation is further adjusted so as to reflect the fact that an average member of the paddy field sub-team, which is composed mainly of able-bodied members, contributes annually thirty more workdays than an average member of the dry field sub-team. Every effort is made to insure that all able-bodied members and highly experienced farmers are equitably allocated among the teams and sub-teams in order to avoid possible variations in farmers' incomes other than those due to differences in the quality and quantity of the work contributed. When possible, members of individual households are assigned to the same sub-team.

As the above example shows, the organization of production units and the allocation of means of production are carefully worked out in order to mobilize all available human and material resources of the farm for efficient production. The Communist regime seems to be fully aware of the influence of the mode of organization upon the farmers' morale and their incentives to produce. Since morale would be seriously affected if two farmers in different production units who had contributed the same number of workdays received markedly different incomes, every effort is made to ensure equality in the conditions of production. Each year's experiences are carefully scrutinized with the aim of improving the manner of organization. At the end of each agricultural year, all the units of production and the manner of organization are reviewed and, if necessary, reorganized.

The circumstances at Namgu Cooperative Farm differ little from those described earlier. Depending upon the natural resources and the location of the cooperative farms, production is organized so as to maximize returns. Each work team is an independent unit in its activities of production and has its own facilities for production. In principle, the same is true of each sub-team. Sub-teams sometimes work cooperatively, however, a practice which to some extent may be seen as an extension of the traditional mutual-aid association called *pumasi* that formerly prevailed throughout rural Korea. Among sub-teams concerned with the same crops, inequalities may arise during the peaks of agricultural work because of heavy simultaneous demands for irrigation and transportation facilities and other farm machinery. In such case, the sub-teams organize a *pumasi* by means of which they exchange labor on a reciprocal basis. This kind of mutual aid among the sub-teams is reported to be extensively employed (Kajimura 1967:17).

All farms do not have all of the specialized work teams we have discussed. Many cooperative farms on the outskirts of urban centers raise principally cash crops of vegetables. Farms in the plains areas tend to specialize in producing cereals. In mountainous areas, animal husbandry, fruit-culture, and sericulture are more common. At these cooperative farms, work teams called *chonghap chagoppan* or "general work team" are multi-functional (Kajimura and Sakurai 1969:16). As its name implies, a general work team engages in various kinds of agricultural activities and produces a range of products, although its sub-teams may specialize. The general work team has apparently proved to be somewhat advantageous for effective year-round utilization of manpower, and in recent years a trend has developed toward an increase of general work teams.

The composition of the farm population shows some notable changes under the Communist regime. As industrialization and urbanization increased, the rural population substantially shrank. We might reasonably assume that those who left farms to engage in non-farming jobs in urban centers are primarily young able-bodied people, a development that would reduce the capacity for agricultural production for lack of young, vigorous workers. Counter-balancing measures, however, have been undertaken by the Communist regime. There is still a demand for additional farm labor, but the mechanization of agriculture, often referred to as the "industrialization of agriculture," has reportedly progressed substantially and has partially met the shortage. The use of weed-killing chemicals, for example, is reported to have led to considerable savings in man-hours of labor, and the introduction of multi-functional tractors has similarly eased the problem. Today, it is quite common to see young women operating tractors, work that at first was regarded as suitable only for men.

Another measure that helped alleviate the farm labor shortage was a strong tendency to assign to cooperative farms soldiers who had completed

their terms of service, even when they originally came from cities. Today, these discharged soldiers are said commonly to form core groups in the cooperative farms together with people of poor peasant origin. Since all of these former soldiers are members of the Korean Workers' Party and were well-disciplined through their military life, which has been called a "school of revolution," they are the most trusted and "revolutionary" class of people in rural North Korea. They are reported to play the leading role in bringing cultural innovations to the farms. The Korea-China Friendship Cooperative Farm (Hwang et al. 1960:212-213) serves as an illustrative example. In late 1959, of a total of 1,227 members, 129 were recently discharged soldiers and these men formed the core group of the work force on this farm. More than ten of the soldiers served in key positions that included the chairmanship of the Socialist Working Youth League, the headship of work teams, and various positions of Party leadership on the farm level.

In connection with the composition of the agricultural labor force, a few words are necessary regarding the qualifications for membership in a farm. In principle, all able-bodied people over sixteen years of age who reside within the boundary of a farm are qualified to be farmers. There are two classes of farmers, however: full members, called *nongjangwon*, and associate members, called *nongjangwon hubo*, literally meaning "candidates for farm membership." The latter category, associate membership, draws our special attention. Qualifications are based upon former social, economic, and political statuses. Associate members consist mostly of the class of people regarded as reactionaries or as politically "impure," including former landlords, "pro-Japanese," and "pro-American" elements. These associate members are denied some civil rights, including the right to vote and eligibility for elected office, and they are excluded from any decision-making body of the farm. Otherwise they have the same rights as full members. The associate members may become full members through devotion to farm and other social activities and through hard work. A full membership may be revoked, however, if one fails to observe the state ordinances or farm regulations or has brought substantial loss to the farm. The full member may be either degraded to associate membership or dismissed from membership.

Finally, let us briefly examine the way in which a cooperative farm is integrated in the broader national network of administrative control. Until early 1962, when a new administrative organ called the County Cooperative Farm Management Committee, or *Kun Hyopdong Nongjang Kyongyong Wiwonhoe*, which specialized in agricultural management and guidance, was set up on the county level, cooperative farms in North Korea had been administered through the conventional administrative channel, that is, the People's Committees on the county, provincial, and state levels. The establishment of the County Cooperative Farm Management Committee marked the separation of the activities of agricultural production from the



administrative sector. The state enterprises that serve the rural economy were placed under the direct control of the County Cooperative Farm Management Committee. These are agricultural machine stations, agricultural machine factories, irrigation control stations, material supply agencies, and epizootic disease prevention centers. All individual cooperative farms within a county are directly controlled and supervised by the County Cooperative Farm Management Committee. This County Committee also gives direct technical assistance to the cooperative farms under its jurisdiction. For instance, most of the major agricultural machines used in farming, including tractors, combines, and trucks, belong to the agricultural machine stations run by the County Cooperative Farm Management Committee. The Committee assigns the agricultural machines and their operators to each farm on a year-round contract. Rental fees for the machines depend upon the quantity of work carried out with the help of the machinery and also the quality of the produce raised with the aid of the machinery.

Beyond the level of the county, the County Cooperative Farm Management Committees within a province are controlled and supervised by the Provincial Rural Management Committee, or *To Nongchon Kyongli Wiwonhoe*. In addition to the cooperative farms, the Provincial Rural Management Committee directly runs the state farms or *kugyong nongjang*. At the top of the hierarchy is the Central Agricultural Commission, or *Chungang Nongop Wiwonhoe*. This is the supreme organizer of the entire operation of agricultural production in North Korea. Following the recent trend toward decentralization of administrative organs related to agricultural production and guidance, the roles of the Central Agricultural Commission have been greatly reduced, thus heavily strengthening the roles of County Cooperative Farm Management Committees. The Central Commission retains chief responsibility for the advancement of agricultural production, running various agricultural research and experimental institutes. Activities under the Central Commission's charge include the improvement of farm machines, selection of seeds, improvement of soil fertility, the supply of fertilizers, animal husbandry, rural by-products, training of agricultural specialists, and large-scale "nature rebuilding" projects such as reforestation, establishment of shelter-belts, and bringing tidelands under cultivation (Kajimura and Sakurai 1969:21).

The numerous changes may be summarized briefly. The former independent peasants have become rural proletarians, under a national scheme of organization. The traditional division of labor has changed greatly. Each working member of the farm is now in charge of a specific portion of the farm work. A household does not exist as an independent unit of production; its members play various roles in farm affairs without reference to the households to which they belong. Unlike the traditionally

loosely-organized village structure, it appears that the cooperative farm as a whole functions in the manner of a single large household.

#### 4. Technological Innovations

The division of Korea in 1945 left North Korea with insufficient arable land to feed her population by use of the farming technology of the time. The mountainous terrain and unfavorably cold climate were serious handicaps. Under Communism, heavy emphasis was first placed upon industrial rather than agricultural development to save the national economy. The priority given to industrialization drew considerable manpower from the rural sector; and the additional shortages of arable land and manpower then strongly stimulated the development of agricultural technology. So long as land remained under private ownership, however, it was almost impossible for small-scale farmers to adopt modern technology. The state farms could do so, and they played the major role in furthering farming technology. It was only after cooperativization was completed that advanced technology, especially in farm machinery, became general in North Korea.

One of the most celebrated slogans in the economic development of North Korea was the phrase "technological revolution," which called for the successful completion of four basic tasks: the development of elaborate irrigation systems, the mechanization of farm labor, electrification, and "chemicalization" or the increased use of agricultural chemicals. Completion of these projects would have been impossible without great financial support from the central government. It is noteworthy that the goal of effecting a "technological revolution" has been officially interpreted to mean "industrializing agriculture" (Kim Il-sung 1970, III:430).

An assessment of the state of "technological revolution" in 1969 concludes that the task of developing irrigation systems had then been "basically" completed (ibid.:431). This project was carried out under the slogan "Task for the Rebuilding of Nature" and entailed a massive mobilization of labor. At first work was limited to the construction of an irrigation network of paddy fields, reservoirs, and dikes. Recently, efforts have been made to extend irrigation to some dry fields. Construction of reservoirs had long been one of the peasants' dreams in North Korea, where the average rainfall per year ranges from about 800 to 1,400 mm., of which about 60% falls during the months of July and August (Kawagoe 1970:108). The numerous reservoirs now existing in North Korea are effective against drought and in increasing productivity. A leading example of the modern irrigation systems is the much-celebrated *Kiyang Suli Ch'egye*, or Kiyang Irrigation System, which pumps water from Taedong River into the Taesong Reservoir in two stages: first, by ten pumps through ten pipes of one meter in diameter and up to thirteen meters in height, and second, by ten pumps through ten pipes of .9 meter in diameter and up to 47 meters in height.

Through dikes of about 1,000 kilometers, the Taesong Reservoir supplies water to approximately 51,000 hectares of land divided into 109 cooperative farms, in twenty-six counties and cities. Water is pumped to high lands at more than 300 pumping stations (Uchino 1968, No. 1; See also *Korea Today*, No. 86:21-23, July 1963). The Yongsong Cooperative Farm, located in the suburb of P'yongyang, is one of the beneficiaries of the Kiyang Irrigation System. Water is pumped from the Taesong Reservoir to the highlands at a height of 150 meters through five stages of pumping (Uchino 1968, No. 2). Today the Kiyang Irrigation System has become a symbol of the success of the "Task for the Rebuilding of Nature." The North Koreans are proud of their roles in changing nature, claiming that "in the past, water flowed from top to bottom, but today it flows from bottom to top" (Uchino 1968, No. 1; Kawagoe 1970:109).

The introduction of sprinkling devices known as *punsusik kwangye ch'egye* is another example of efforts to save agriculture from drought and to promote productivity. Through pipelines installed deep in the ground, water is supplied to the fields, especially to vegetable gardens. Installation of this system was very expensive, but its advantages in increasing production have been very great. Before the introduction of the sprinkler systems, 6,000 to 7,000 *chongbo* of land were required to supply vegetables to P'yongyang City. Today, with the sprinkler system, only 2,000 to 3,000 *chongbo* of land are necessary. The resulting savings, in this urban area alone, come to some 4,000 *chongbo* of arable land, which is equal to the area of arable land in the average county (Kim Il-sung 1970, III:428).

Traditionally, oxen were the only draft animals used in Korean farming. Horses were rarely used. Except for plowing and the pulling of vehicles, farm work was done manually. In 1948 a very few tractors were imported into rural North Korea (Sakurai 1965:68). They proved to be impractical, since the lands were still under individual ownership and peasants found no need for the expensive machinery to replace their oxen. It was only on state farms and other state enterprises that tractors were then utilized. In early 1950, the Communist regime set up five *Nonggigye Imgyongso* or "Agriculture Machine-Hire Stations" with a total of seventy tractors to provide mechanical labor for needy farmers. During the Korean War (1950-1953), which cost rural North Korea heavily in manpower and oxen, the machine-hire stations appear to have become firmly established, and the number of stations and tractors has since increased rapidly. When cooperativization was completed in late 1958, the number of stations had increased to seventy, with a total of 1,211 tractors. Two years later, in 1960, the number of tractors had reached 5,214, at eighty-nine stations (Sakurai 1965:70).

The rapid increase in the number of tractors may be attributed to the fact that North Korea had begun active mass production of tractors with her own technology and materials in 1959. According to Sakurai, writing in 1965,

North Korea had manufactured about 3,000 tractors of approximately thirty horsepower each year since 1960 (ibid.:73). This figure seems later to have been far exceeded, however, since Kim Il-sung (1970, III:432-433) believes that by 1969 the capacity of tractor manufacture had reached 10,000 per year, with tractors still in great demand. Although rapid industrialization is primarily responsible for the increased supply of modern agricultural machinery, cooperativization of agriculture created the demand.

The impact of tractors on North Korean agriculture was tremendous. These machines have taken over most of the hard manual labor of former times. The tractors are especially designed for multiple use. Combined with various attachments, a single tractor does the plowing, seeding, weeding, harvesting, threshing, irrigation, pumping, silage cutting, sawing, and transporting. The consequently reduced need for labor undoubtedly helps explain the great reduction of the farming population. According to official statistics, only 42.8% of the total manpower in North Korea was engaged in farming (as members of agricultural cooperatives) in 1963, whereas 74.1% of the population had been peasant farmers in 1946. Thus, during this interval of seventeen years, over 31% of the total labor force had left rural occupations (Central Bureau of Statistics 1965:7).

The use of tractors has its own limits, due to field conditions. In sandy fields and in mountainous areas where fields slope fifteen degrees or more, tractors cannot be used. Of 1.9 million *chongbo* of arable land in North Korea, a little over one-third (0.7 million *chongbo*) was apparently unsuitable for the use of tractors (Sakurai 1965:72). Improving techniques of transplanting rice, which requires much manual labor for a short period of time, has been one of the major tasks of agricultural technology in order to meet the manpower shortage. Mechanization now seems to be in sight. A recent report (Spurr 1974:49) states that North Korea has made good progress in designing rice transplanters, which were reported to be handling 30% of the crop in the spring of 1974. There is also some indication that Communist authorities have tried to experiment with direct seeding of rice without transplanting, but so far satisfactory techniques do not appear to have been developed (Kim Il-sung 1970, III:432).

The number of trucks in use is impressive. According to a report in the *Rodong Sinmun* (11/10/70), during 1961-1969 the number of trucks in rural North Korea increased 6.4 times.

Mechanization of agriculture has, of course, reduced the importance of draft-animals in rural North Korea. Oxen are still used fairly extensively, however, especially in areas where conditions of the land disfavor machines.

Among the four main tasks of the "rural technological revolution," the goal of electrification has been most successfully reached, and electrification has possibly reached the level of that of other advanced nations (*Rodong Sinmun*, 11/3/70). In the spring of 1969, 91.2% of North Korean farm

households were reportedly equipped with electricity (Kawagoe 1970:108). In addition to improving conditions of daily life, electrification has been important in reaching toward the other goals of the "rural technological revolution," that is, the development of irrigation and mechanization in general. Without electric power, for example, the complex irrigation systems could not have been established. Today all farm work that is done at fixed sites, such as threshing, pumping, and silage processing, is carried out by electric power.

Considerable progress appears to have been made in reaching the goal of increasing the supply of fertilizer and agricultural chemicals. The use of fertilizer per *chongbo*, only 131 kilograms in 1949, was over 500 kilograms in 1969 (Central Bureau of Statistics 1965:21 and Kawagoe 1970:109). The supply of agricultural chemicals other than fertilizers, such as insecticides and weed killers, is reported to have increased greatly in recent years. In former times, weeding demanded much human labor.

In addition to the governmentally sponsored changes made under the name of the "technological revolution," a number of grassroots technological innovations also occurred and have become generally established. The technique of shifting soil to improve its fertility, known as *hukkari*, is one of these grassroots innovations. In order to revitalize the soil, farmers are encouraged to turn the topsoil over. This does not mean plowing, which can be easily done, but involves a complete turn-over of topsoil to a considerable depth once every few years so that the "exhausted" soil is replaced at the surface by rich soil. This job is largely done by human labor, and takes a considerable amount of manpower. It seems that the farmers do not mind the cost of human labor if it results in better returns. Revitalization of the soil may also be achieved by mixing poor local soil with better soil brought from elsewhere. This type of revitalization of the soil, known as *kaekt'o chagop*, is especially common in areas where the native soil is too sandy to be suitable for rice farming; soil of high quality is brought in and a suitable mixture is created.

Changing the soil is not new, but since it requires much labor, it was seldom practiced in pre-Communist days. Today, under the cooperative management of agriculture, the practice has become common and is one of the techniques promoted by the agricultural campaign to improve soil fertility and produce better crops. This campaign takes place during the winter season between the end of harvest and the beginning of spring plowing, as part of the preparation for next year's farming.

Another technique to enrich the soil is known as *sot'o chagop*, literally, "soil-baking work," and seems to be based upon the same idea as slash-and-burn agriculture. The procedure is quite simple: soil is spread thinly on firewood, brush, or, more commonly, grain stalks, and the latter are ignited. This heat treatment is also accomplished by putting small amounts of soil on



the fire in the kitchen stove while preparing meals everyday, thus saving fuel and at the same time treating the soil. The soil so treated is collected at regular intervals and spread on the fields. Outside baking is done chiefly during the slack winter season and the stove treatment continues throughout the year. The treatment is said to remove all harmful elements from the soil and to protect it from excessive acidification. To some extent, the baked soil functions as a chemical fertilizer, and is said to strengthen roots. Soil that has been treated in this way is reported to be especially effective in the rice seed-beds and in raising corn. According to one source, the application of baked soil has been successful in increasing production. By capitalist standards, it may be difficult to find any notable advantages of these efforts to improve soil fertility, with respect to amount of labor input, but they undoubtedly increase productivity.

Other new agricultural techniques have developed or have been borrowed from other nations. Two examples are *naengsangmo* or "cold seed-bed" and *myonhwa yongyangdanji kasikpop* or "cotton nursery method," which are notable because they attempt to control the natural environment by technology. The "cold seed-bed" is used for rice. Traditionally, the cultivation of rice, the principal national food, had been concentrated chiefly in the south. The cold weather and a relatively short warm season had limited rice cultivation in northern Korea, which faced a severe rice shortage after the division of the nation. It is difficult to discern when the "cold seed-bed" technique began in North Korea. It seems, however, likely that it had not been widely known to North Korean farmers until the mid-1950s. According to Kim Han-ju (1958:58-59), the cold seed-bed became widely introduced in North Korea by 1957, when it was used in 10.7% of total paddy field.

Preparation of the "cold seed-bed" requires considerable labor and material. In order to protect the seedlings from the cold, the seed-bed is covered with oiled paper or vinyl, allowing the seeds to be planted several weeks earlier than the old technique permitted. The seedlings are transplanted from the seed-bed into the fields in about one-and-a-half months. Transplanting is completed around the middle of May, which is a little over one month earlier than previously (Kim Il-ch'ul 1959:11). Use of the cold seed-bed has several advantages. It makes the seedlings strong and healthy, and provides additional time for growth, thus allowing successful cultivation in the northern climate. In addition, the method helps reduce considerably the amount of seed required. According to an informant who has had actual experience in rural North Korea, a seedling grown in the cold seed-bed grows after transplanting to have almost ninety stalks, a much larger plant than earlier practices yielded. Today, the use of the cold seed-bed is said to prevail throughout North Korea and is claimed to have resulted in greatly increased rice production.



The technique called "cotton nursery" began in the late 1950s. Except in a small region, the climate of North Korea is too cold for the cultivation of cotton. After the division of Korea, the shortage of cotton was acute in North Korea. One solution was the "cotton nursery" method of cultivation, which, unlike the conventional method of planting seeds in the fields, calls for the cultivation of seedlings for transplanting. The nursery is filled with humus and covered with oiled paper or vinyl for warmth. As compared with direct seeding, this new method also requires a considerable amount of additional labor. It is claimed, however, that the method not only has proven to be productive, but also has enabled North Korea to expand its area of cotton cultivation to the far northern part of the country. Although recent developments in the synthetic textile industry may have considerably weakened the importance of cotton production, the innovation demonstrates the determination to increase production even when doing so requires added labor.

These two methods of cultivation are often called "the advanced productive farming methods" or *sonjinjok tasuhwak nongpop*, and both require several times more labor than was needed by earlier methods. Since these tasks are done in the later winter well before the beginning of the heavier spring farm work, they utilize manpower that would otherwise be wasted and cause no conflict with other farming procedures. As these two methods well exemplify, the goal of increasing production has been a matter of great concern.

The circumstances described above lead us to believe that these innovations are chiefly concerned with making use of all potential resources, technological, material, and human, for the goal of increased production. It is true that much of the agricultural development in North Korea is due to the "rural technological revolution," but development has also been greatly spurred by utilizing all available human resources, in particular farm workers, who have exerted themselves to the utmost to increase productivity.